

U.S. Census Bureau's



MAF/TIGER Accuracy Improvement Project -- An Update

Presented by

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WaTrans Partner's Meeting

MAF/TIGER Accuracy Improvement Project — Objectives



- Correct the locations of streets and other map features (in TIGER);
- Correct the locations of housing units (in the MAF);
- Implement automated change detection methods.

MAF/TIGER Accuracy Improvement Project -- Implementation



- **In 2002**, the Census Bureau partnered with the Harris Corporation and signed a contract for the implementation of the MTAIP.
- **January 2003**, began testing production and quality control procedures
- **February 2003**, first files put into production
- **Completion by end FY 2008**, have a highly accurate (7.6m or better) street centerline "digital map" (geographic data base) of the entire United States, Puerto Rico, and the associated Island Areas.

MAF/TIGER Accuracy Improvement Project – Strategy



Primary Strategy:

Census Bureau Regional Office Geographers **acquire state, local and tribal files** to be used as the reference source to correct the street locations, add missing roads, and update the road names.

Secondary Strategy:

Harris Corporation will obtain and use:

- highly accurate private sector GIS files **OR**
- Imagery to build street centerline files **OR**
- Field collects the street centerline information

MAF/TIGER Accuracy Improvement Project -- Desired Digital File Content



- Street Centerlines
- Boundaries (counties, places, Federally recognized tribal lands)
- Hydrography
- Rail Features
- Structure Coordinates or Building Footprints (w/ addresses)
- Cadastral or Tax Parcels
- Legal Entity Boundaries
- Census Statistical Entity Boundaries

MAF/TIGER Accuracy Improvement Project – Evaluation of Source Files



- **7.6 meter or better spatial accuracy** requirement for street centerline files (using circular error 95)
- **110 GPS coordinate points** for street T-intersections, used to evaluate the **spatial accuracy** of each source file
- **Attributes or other characteristics** of a file may be used if the file does not meet the CE 95 requirement
- **Addresses and the coordinates for structures, as well as boundaries** are evaluated separately.
- **File must be provided without any royalty or copyright restrictions**

MAF/TIGER Accuracy Improvement Project -- Production Schedule



Projected Annual Production by Fiscal Year (October – September)

- FY03 – Approx. 250 Counties
- FY04 – Approx. 600 Counties
- FY05 – Approx. 700 Counties
- FY06 – Approx. 700 Counties
- FY07 – Approx. 600 Counties
- FY08 – Approx. 250 Counties

MAF/TIGER Accuracy Improvement Project – Status on National Level



Progress as of Sept 30, 2003 (FY 03):

- 250 Counties enhanced/realigned (using primarily locally provided files)
(goal attained)
- 4 Counties tested the collection of road centerlines via Mobile GPS vehicle
(North Carolina)

FY 2004 Q1 progress (Oct - Dec 2003):

- 114 Files provided to contractor from Census
- 31 Number of counties enhanced/realigned

Target number of enhanced files for FY 2004: 600

- 300 Utilizing local GIS
- 300 Will be collected through centerline field collection, commercial sources
and/or imagery sources

MAF/TIGER Accuracy Improvement Project -- Status for Washington State



13 – Contacted, acquired files

- 1 – Contacted, need to acquire file

14 – Contacted, should complete by end of CY

- 2 – Contacted, work-in-progress, complete 1-4 yrs

- 2 – Contacted, no Centerline file or not 7.6m (or less)

- 7 – Not contacted yet or need additional info

MAF/TIGER Accuracy Improvement Project – Interaction with other Federal Programs



- RO Geographers coordinate with USGS state liaisons
- Will be providing USGS the corrected TIGER Roads centerline files to incorporate into The National Map
- Have provided inventory database (TIGER Enhancement Database) to the USGS, NIMA, and State GIS Coordinators
- The Harris FY 2004 schedule will be available through the FGDC website.

MAF/TIGER Accuracy Improvement Project – GOALS



- **Improved Map Accuracy** -- A highly accurate street centerline "digital map" (geographic data base) of the entire United States, Puerto Rico, and the associated Island Areas.
- **Improved Address Accuracy** -- Highly accurate MAF/TIGER locations will enable Census Bureau field staff using GPS equipped hand-held devices to implement more accurate field data collection methods.
- **Improved accuracy in data tabulation** for governmental units and other small areas will facilitate redistricting and various other federal and state funding programs.
- **A more effective / lower cost** 2010 Census, ACS, and other household survey operations.

MAF/TIGER Accuracy Improvement Project – GOALS (continued)



- **Easier exchange of data** -- Aligning the MAF/TIGER database with GIS/GPS/Imagery files maintained by state, local and tribal partners, other federal agencies and private sector firms will allow for the implementation of programs in a digital file based format, rather than a paper-based format.
 - BAS via a web application (*CIP/ 2*)
 - Web TIGER Map
(*potential for exchange and update of geographic data via a web application*)
 - Census geography in local GIS
(*reduction or elimination of labor-intensive update activities*)

MAF/TIGER Accuracy Improvement Project -- GOALS (continued)



- **Improved federal coordination** -- A source for The National Map, Geospatial One-Stop, and the National Spatial Data Infrastructure
- **Supporting the Administration's Geospatial One-stop E-government initiatives** in compliance with the requirements of the Government Paper Work Elimination Act, OMB circular A-16, and Executive Order 12906.

MAF/TIGER Accuracy Improvement Project and Local Participation ?



- **Provide** the Census Bureau (via the Regional Geographers) with **GIS files** that meet our accuracy requirements and, if possible, have good written descriptions of the contents (metadata)
- **Continue to participate in the Boundary and Annexation Survey** so we can represent the boundary information accurately
- **Help us to identify counties** where no suitable spatial data exist and there are no plans to create road centerlines – Harris can plan to create an accurate road centerline without concern of overlap or duplication
- **Keep the Regional Geographers informed / involved** in data development activities

More Information



Census Bureau's Website:
www.census.gov

MTAIP

<http://www.census.gov/geo/mod/partner.html>

TIGER/Line

<http://www.census.gov/geo/www/tiger/index.html>

More Information



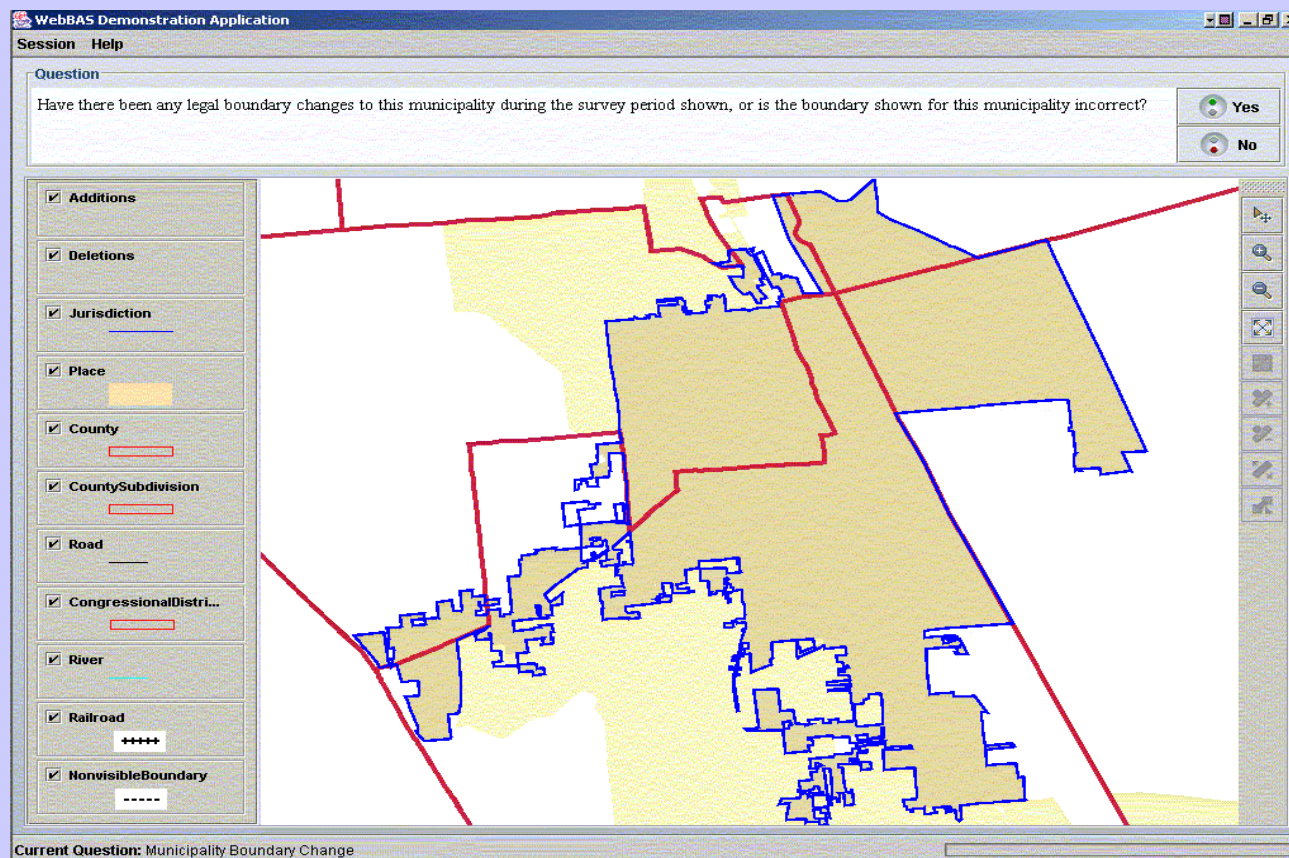
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Web BAS Being Tested



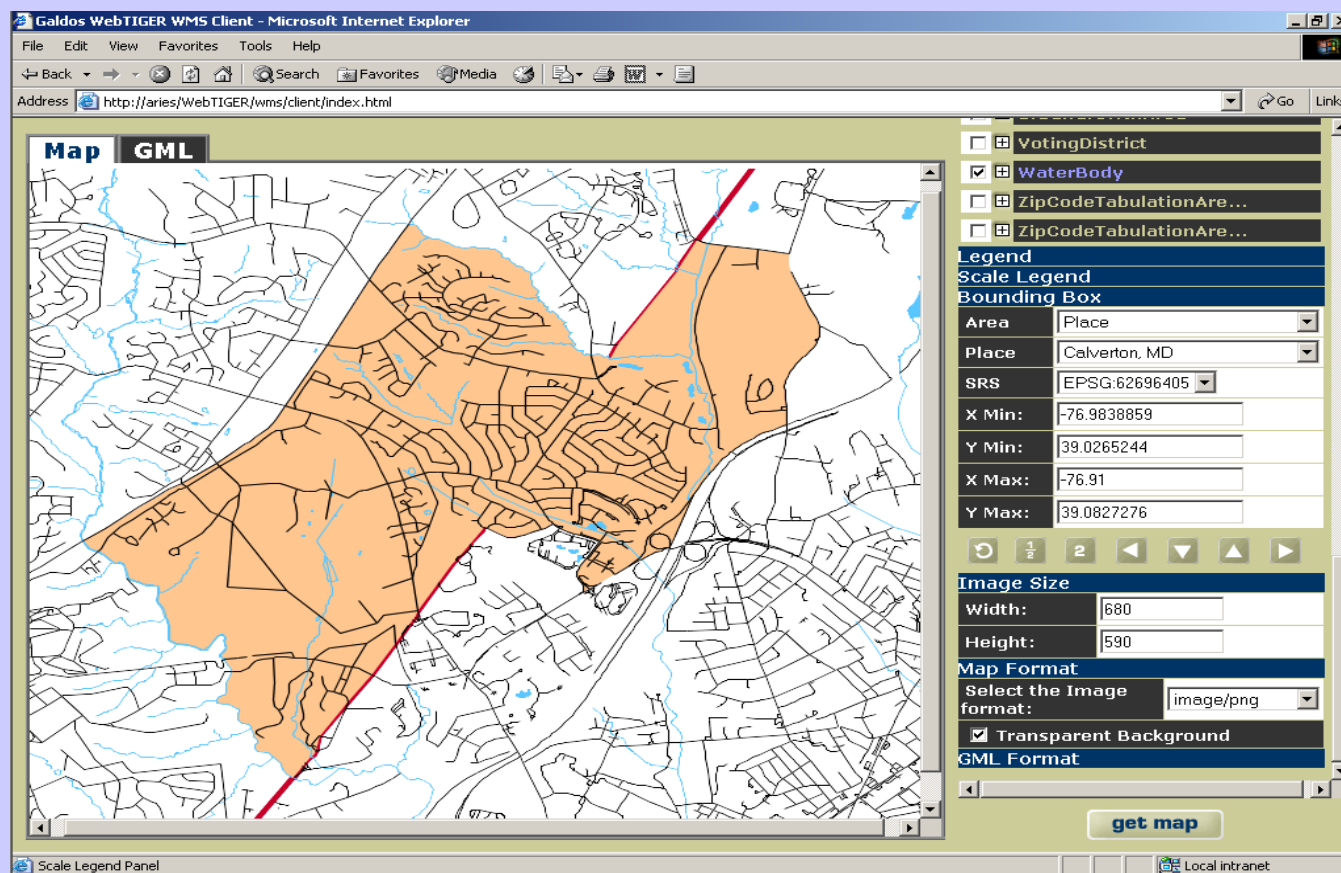
Web BAS



Web TIGER Map Being Tested:



Web TIGER Map



Thank You



Questions ???????

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